SUBSTITUTE ABSTRACT

The fuel cell assembly disclosed includes at least one unit fuel cell comprising a separator having flow channels for oxidizing gas, a cathode to which the oxidizing gas is fed, a membrane electrolyte of proton conductivity, an anode to which fuel gas is fed, and a separator having flow channels for the fuel gas, the above members being arranged in order. The fuel cell assembly further comprises a humidifier having a porous member to humidify at least the <u>fuelexidizing</u> gas to be fed to the anode. The porous member of the humidifier is so disposed as to face at least the flow channels for the oxidizing gas so that water is supplied to the flow channels from part of the surface of the porous member opposite to the water supplying face and/or from the outer periphery of the porous member.